

MATP-613US

PATENT

**Remarks/Arguments:**

Claims 1-30 are pending in the above-identified application.

Claims 29 and 30 were rejected under 35 U.S.C. § 101 for being directed to a recording medium storing nonfunctional descriptive material. This rejection is overcome by amending claims 29 and 30 to be dependent on claim 1. Claim 1, being a valid method claim, is by definition functional. Thus, any recording medium containing computer program instructions that cause a computer to perform the method of claim 1 must be a recording medium that includes functional descriptive material. Because claim 29 is not directed to a recording medium storing nonfunctional descriptive material, claim 29 is not subject to rejection under 35 U.S.C. § 101. Claim 30 depends from claim 29 and is not subject to rejection under 35 U.S.C. § 101 for at least the same reasons as claim 29.

Claims 1, 15 and 29 were rejected under 35 U.S.C. § 103 (a) as being obvious in view of Shin et al. and Acharya et al. With regard to claim 1, this ground for rejection is overcome by the amendments to claim 1. Applicants appreciate the indication in the Office Action that claim 2 would be allowable if amended to be independent and to include all of the limitations of its base claim. In particular, the Examiner asserts that claim 2 includes uniquely distinct features not disclosed by the prior art. Accordingly, Applicants have amended claim 1 to include some of the uniquely distinct features of claim 2.

Shin et al. disclose an edge detector which generates an edge map, determines the angle for an edge and interpolates the edge pixel along the edge. However, Shin et al. do not determine an angle for the edge by determining a ratio of the first and second gradient intensity values and processing the ratio of the first and second gradient intensity values to determine an approximate angle of the edge, as required by amended claim 1.

Acharya et al. disclose a method and apparatus that determines which pixels are edge pixels and non-edge pixels and generates a corresponding edge map. Acharya et al. do not determine an angle for any edge. Because neither Shin et al., nor Acharya et al. disclose at least these limitations of claim 1, claim 1, as amended, is not subject to rejection under 35 U.S.C. § 103(a) in view of Shin et al. and Acharya et al.

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With regard to claim 15, this ground for rejection is overcome by the amendments to claim 15. Applicants appreciate the indication in the Office Action that claim 16 would be allowable if amended to be independent and to include all of the limitations of its base claim. In particular, the Examiner asserts that claim 16 includes uniquely distinct features not disclosed by the prior art. Accordingly, Applicants have amended claim 15 to include some of the uniquely distinct features of claim 16. In particular, neither Shin et al., Acharya et al. nor their combination disclose or suggest:

a comparator that compares the first and second magnitude values to identify a larger magnitude value and a smaller magnitude value;

a subtractor that subtracts the smaller magnitude value from the larger magnitude value to generate a difference value, wherein at least the larger magnitude value and the difference value are represented as bit-strings; and

logic circuitry, coupled to receive the larger magnitude value which identifies a most significant non-zero bit position in the larger magnitude value

as required by amended claim 15.

With regard to claim 29, this ground for rejection is overcome by the amendments to claim 29 which make claim 29 a dependent claim on claim 1.

Accordingly, claims 1, 15 and 29 are not subject to rejection under 35 U.S.C. § 103(a) in view of Shin et al. and Acharya et al.

Claim 7 has been amended to be independent in form, including all of the limitations of its base claim, claim 1. Claim 7 was objected to only as being dependent from a rejected base claim. Accordingly, with this amendment, claim 7 is in condition for allowance.

Claims 2, 3, 11, and 12 have been amended to be consistent with the amended claim 1. Claims 16, 21, 26 and 28 have been amended to be consistent with amended claim 15. Claim 30 has been amended to be consistent with amended claims 1 and 29. No new matter is added by these amendments.

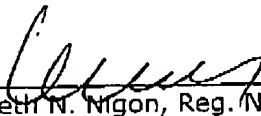
The prior art made of record but not applied has been considered but does not affect the patentability of the invention.

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In view of the foregoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1, 15, 29 and 30 the objections to claims 2-14 and 16-28.

Respectfully submitted,

  
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April 20, 2006

  
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Patricia C. Boccella

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